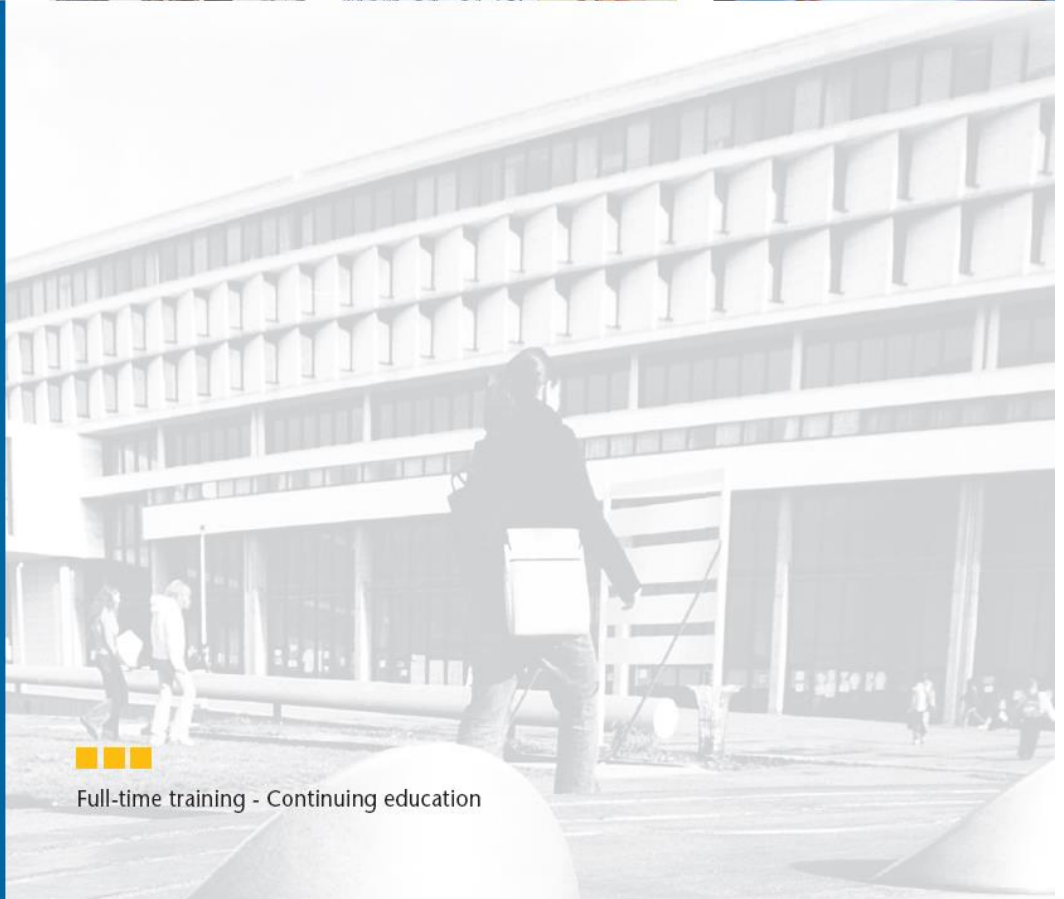

MASTER 2

research

Economic Analysis

Content of courses



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UFR research



Full-time training - Continuing education

Master 2 Economic Analysis

Content of courses

Academic year 2019-2020

1st term, September to December

Choice and Decision Theory

Microeconomic theory of individual decision making in the settings of consumption and production decisions. General Equilibrium, introductory examples.

Econometrics I: Fundamentals of Econometric Theory

Finite Sample Properties of Ordinary Least Squares. Large Sample Properties with Random Sampling. Instrumental Variable Methods. Maximum Likelihood Methods. Topics in Time Series.

Mathematics for Economics

The essential mathematical concepts and notation most likely to encounter in reading research articles in economic theory. Selected topics: Calculus and Multivariate Calculus. Unconstrained and Constrained Optimization. Linear Algebra. Correspondences and Fixed Points. Differential Equations.

Mathematical foundations of key modeling techniques. Topics include: Difference equations; Discrete time dynamic optimization and Euler's equation; General topology; Fixed point theorems and applications to the existence of Nash and Walrasian equilibria; Differential equations.

Macroeconomics I: Growth and overlapping generation model – starting date: October

The Solow growth model. Empirical investigations on economic growth/growth and human capital. Optimal growth: the Ramsey growth model. The OLG model. Endogenous growth, AK model. Endogenous technical change.

Microeconomics I: Choice under Uncertainty and Game Theory -- starting date: October

Risk and Uncertainty. Decision under uncertainty. GE under uncertainty. Main concepts and tools of game theory.

Applications of Econometrics I (10 hours)

An applied course that relies on statistical software's. Specific identification techniques used in the empirical literature (e.g., Propensity Score Matching, Differences in Differences, Regression Discontinuity Design and Natural Experiments). Examples using datasets, notably those from articles published in the best scientific journals.

Macroeconomics II: Fluctuations

Overview of current economic fluctuations theories, with a special focus on the inflation-unemployment tradeoff from Dynamic Stochastic General Equilibrium (DSGE) models. Resolution and simulation, qualitative and quantitative evaluations of such models under rational expectations hypothesis. Analysis of optimal stabilization policies.

Microeconomics II: Welfare Economics and Markets failures

The two welfare theorems and possible market failures. Asymmetric information among the market participants and the problem of achieving efficiency. Corrections of these different market failures.

Applications of Econometrics II

Applications of Econometrics I to real data using R and Stata: Simple linear regression on time series (CAPM model with heteroskedasticity tests and tests for the autocorrelation of the error term), multiple linear regression on cross-sectional data, multiple linear regression on panel data, IV regression, nonlinear regression (using binary Probit/Logit models), autoregressive models.

One course among 2 described below:

One course is to be chosen among 2 described below.

Microeconometrics

The econometrics of cross-section and panel data. Linear and non-linear econometric models, continuous and discrete dependent variables. Instrumental variable estimators, linear panel data estimators, models for discrete dependent variables and sample-selection models.

Time Series Analysis

Stationary time-series and non-stationary multivariate processes (structural and reduced-form). A typology of linear dynamic time-series models and, concept of cointegration, with applications to dynamic systems of equilibrium-correction relations. Modeling and forecasting macroeconomic and financial systems. and study of state-space models.

2 elective courses among any of the three specializations below

Industrial Organization

Industrial Organization

Main techniques and themes of Industrial Organization: strategic behavior of firms, market competition, competition and antitrust policy.

Empirical Industrial Organization

Structural empirical models in Industrial Organization. Demand modeling in IO and their applications, analysis of structural estimation of auction models, regulation, asymmetric information models and entry models.

International Economics

International Finance

The main models of open macroeconomics and international finance and recent research on the field. Intertemporal model of the current account; monetary models of exchange rate determination with fixed prices and flexible prices; models of currency crises; portfolio diversification.

International Trade

Traditional and more recent theories of international trade. Ricardian and Heckscher-Ohlin models, extension to many goods and factors. Models of trade with imperfect competition. Gravity equations. Trade from the point of view of individual firms.

Public Economics

Labor Economics

Themes in modern labor economics, focus on microeconomic models and empirical research with relevant policy implications. The role of human capital accumulation, wage determinants, education economics and labor supply. Discussion of some macroeconomic issues about employment and unemployment.

Public Economics Taxation and its impact on economic behavior (e.g., labor supply, savings decisions), economic equilibrium (tax incidence). Under informational imperfections and other distortions. analysis of indirect taxation, taxation of capital, nonlinear taxation of income and the provision of public goods.

3nd term, April to June

Master's Thesis

The master's thesis is a piece of original scholarship, written under the direction of a faculty advisor, on a relevant topic in economics the student is interested in. Students are strongly advised to find a supervisor by the beginning of the academic year. Meetings with professors to discuss possible topics will be organized.

Research seminar I: Professors seminar

The role of this seminar is to develop critical thinking skills through active participation and writing of referee reports by students. Students will have to write a referee report on (at least) one of the papers presented at seminars. By the end of the term, students must be able to read a research paper, to know how to place it in the literature, how to identify its strengths and weaknesses and to write an effective referee report.

Research seminar II: Students seminar

The objective of this seminar is to develop students' oral skills and ability to present research papers, as well as to develop critical thinking through the discussion of other students' presentations. Each student makes several presentations to other students and professors. He/she presents some research papers related to the topic of his/her master thesis and focuses on his/her own research subject and methodology.

Courses		Hours	Credits
T1: September to December			
	Econometrics I: Fundamentals of Econometric Theory	27	3
	Choice and Decision Theory	27	2
	Macroeconomics I: Growth and overlapping generation model	27	2
	Microeconomics I: Choice under Uncertainty and Game Theory	27	2
	Applications of Econometrics I	10	1
	Mathematics for Economists	27	2
T2: January to March			
	Applications of Econometrics II	27	3
	Macroeconomics II : Fluctuations	27	3
	Microeconomics II : Welfare Economics and Markets Failures	27	3
<i>Econometrics III : 1 course among 2</i>	Microeconometrics	27	3
	Time Series Analysis	27	3
<i>2 electives among 6 (within 3 specializations)</i>	Industrial Organization	27	3
	Empirical Industrial Organization	27	3
	International Finance	27	3
	International Trade	27	3
	Labor Economics	27	3
	Public Economics	27	3
T3: April to June			
	Master's Thesis		30
	Research Seminar 1: Professor's Seminar		
	Research Seminar 2: Student's Seminar		